

Appln. No. 10/621,810
Amendment dated August 20, 2004
Reply to Office Action of February 20, 2004

The listing of claims will replace all prior versions and listing of claims in the application:

Listing of Claims:

Claim 1(Cancelled)

Claim 2(Currently Amended) The display of claim 4 45, wherein said select diffracted energies are projected by a projection system.

Claim 3(Currently Amended) The display of claim 4 45, wherein the center of gravity of said element is the location of said pivot point.

Claim 4(Currently Amended) The display of claim 4 45, wherein said pivot point is spaced-apart from the center of gravity of said element.

Claim 5(Currently Amended) The display of claim 4 45, wherein said one or more electrically energizable coils each consist of multiple turns.

Claim 6(Currently Amended) The display of claim 4 45, wherein said one or more electrically energizable coils each consist of a single turn.

Claim 7(Currently Amended) The display of claim 4 45, wherein said magnetic component comprises a permanent magnet having principal dimensions commensurate with said diffraction grating and said diffraction grating is affixed to said magnet.

Claim 8(Currently Amended) The display of claim 4 45, wherein said magnetic component and said diffraction grating are affixed to a carrier having a first surface, a second surface, a first edge, and a second edge.

Claim 9(Original) The display of claim 8, wherein said diffraction grating is disposed along said first surface and said magnetic component is a permanent magnet disposed along said second surface.

Claim 10(Original) The display of claim 8, wherein:

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said magnetic component includes a first permanent magnet disposed along said first surface adjacent said first edge and a second permanent magnet disposed along said first surface adjacent said second edge; and
said energizable coil includes a first coil magnetically coupled with said first magnet and a second coil magnetically coupled with said second magnet.

Claim 11(Original) The display of claim 8, wherein:

said magnetic component includes a first permanent magnet disposed along said first surface adjacent said first edge and a second permanent magnet disposed along said second surface adjacent said second surface; and
said energizable coil includes a first coil magnetically coupled with said first magnet and a second coil magnetically coupled with said second magnet.

Claim 12(Currently Amended) The display of claim 4 45, wherein said magnetic component comprises a carrier having plurality of discrete permanent magnetic particles embedded within said carrier.

Claims 13-23 (cancelled)

Claim 24 (Cancelled)

Claim 25(Currently Amended) The method of claim 24 46, which includes the step of projecting with a projection system said generated different select diffracted energies onto a surface.

Claim 26(Currently Amended) The method of claim 24 46, which further comprises the step of providing said one or more electrically energizable coils as multiple turn coils.

Claim 27(Currently Amended) The method of claim 24 46, which further comprises the step of providing said one or more electrically energizable coils as single turn coils.

Claim 28(Currently Amended) The method of claim 24 46, which further comprises the steps of:
(f) providing said magnetic component as a permanent magnet having principal dimensions commensurate with said diffraction grating; and

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- (g) affixing said diffraction grating to said permanent magnet.

Claim 29(Currently Amended) The method of claim 24 46, which further comprises the steps of:

- (h) providing a carrier having a first surface, a second surface, a first edge, and a second edge; and
(i) affixing said magnetic component and said diffraction grating to said carrier.

Claim 30(Original) The method of claim 29, which further comprises the steps of:

- (j) disposing said diffraction grating along said first surface of said carrier;
(k) providing said magnetic component as a permanent magnet; and
(l) disposing said permanent magnet along said second surface.

Claim 31(Original) The method of claim 29, which further comprises the steps of:

- (m) providing said magnetic component as a first permanent magnet and a second permanent magnet;
(n) disposing said first permanent magnet along said first surface adjacent said first edge;
(o) disposing said second permanent magnet along said first surface adjacent said second edge; and
(p) providing said energizable coil as a first coil magnetically coupled with said first magnet and a second coil magnetically coupled with said second magnet.

Claim 32(Original) The method of claim 29, which further comprises the steps of:

- (q) providing said magnetic component as a first permanent magnet and a second permanent magnet;
(r) disposing said first permanent magnet along said first surface adjacent said first edge;
(s) disposing said second permanent magnet along said second surface adjacent said second edge; and
(t) providing said energizable coil as a first coil magnetically coupled with said first magnet and a second coil magnetically coupled with said second magnet.

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Claim 33(currently amended) The method of claim 24 ~~46~~, which further comprises the step of providing said magnetic component as a carrier having plurality of discrete permanent magnetic particles embedded within a said carrier.

Claims 34-44 (cancelled)

Claim 45 (New) A display wherein each pixel exhibits a full range of diffracted wavelengths of energy, comprising:

- (a) a broadband source;
- (b) an eye station;
- (c) an element having a pivot and carrying a magnetic component and a holographic pattern of a diffraction grating positioned to diffract energies incident on said holographic pattern from said broadband source and;
- (d) one or more coils fixed relative to said element, magnetically coupled to said element, and electrically energizable for movement of said element; and
- (e) a source for electrically energizing said one or more coils to cause said element carrying said holographic pattern to rotate about said pivot and to generate any select diffracted energy from said holographic pattern at said eye station for forming a display.

Claim 46 (New) A method for generating a display wherein each pixel exhibits a full range of diffracted wavelengths of energy, comprising the steps of:

- (a) providing a broadband source;
- (b) providing an eye station;
- (c) providing an element having a pivot and carrying a magnetic component and a holographic pattern of a diffraction grating, said holographic pattern being positioned to diffract energies incident on said holographic pattern from said broadband source;
- (d) providing one or more coils electrically energizable for movement of said element;
- (e) positioning said one or more coils for magnetically coupling with said magnetic component;
- (f) fixing said one or more coils relative to said element;
- (g) providing a source for electrically energizing said one or more coils; and

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- (h) energizing said source to electrically energize said one or more coils to cause said element carrying said holographic pattern to rotate about said pivot and to generate any select diffracted energy at said eye station for forming a display.